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The major pathway of olfactory transduction

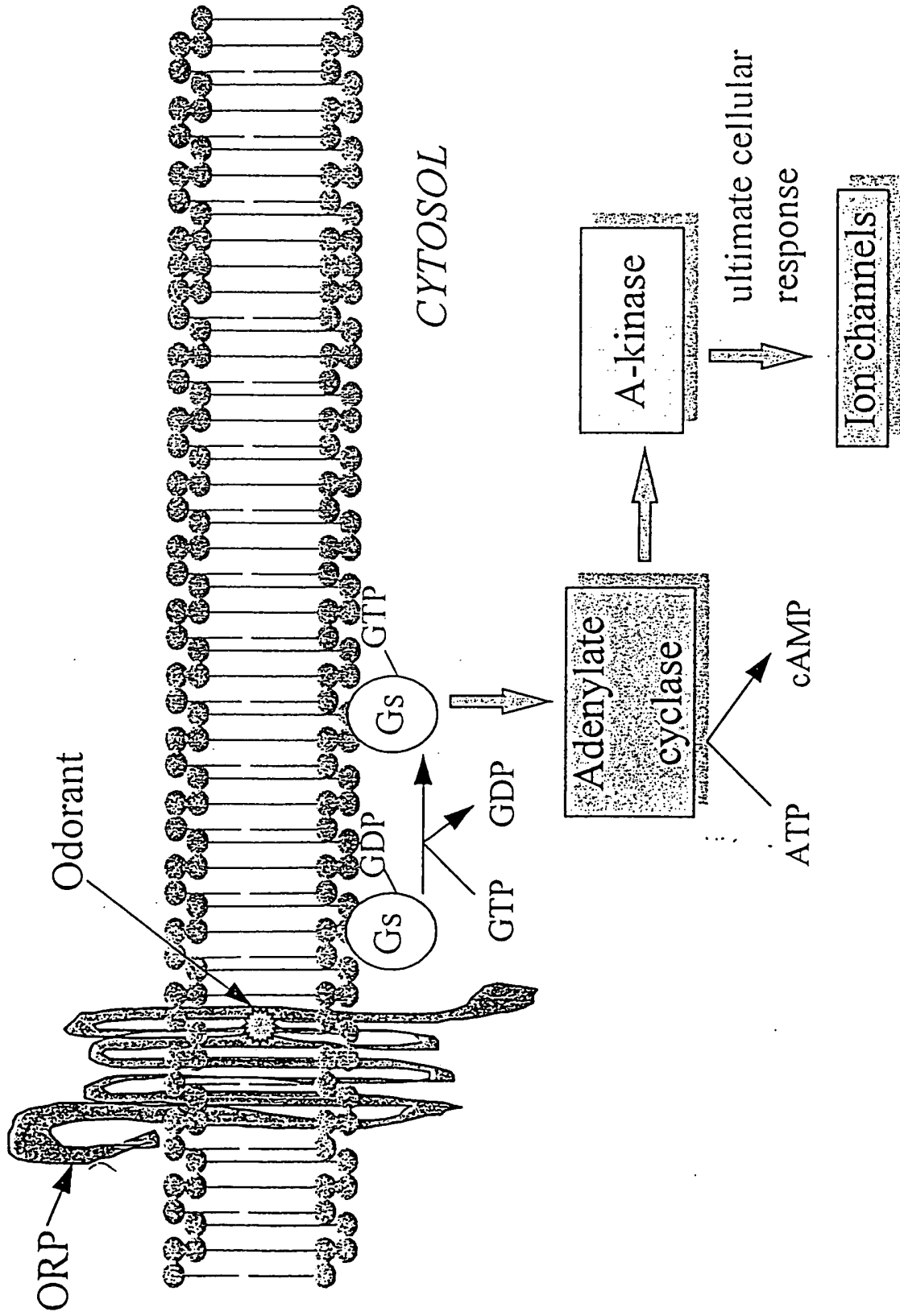


FIG 20-48550

Search protein sequence
(1^o Structure)



Establish 2^o structure



3^o structure modeling with
template

Insight II (affinity docking)



GRAMM (geometric fit)



Substrate (gas)



intermolecular interactions
intramolecular interactions
solvation effects
conformational changes

bond stretching
valence angle bending
torsion
van der Waals force
electrostatic force

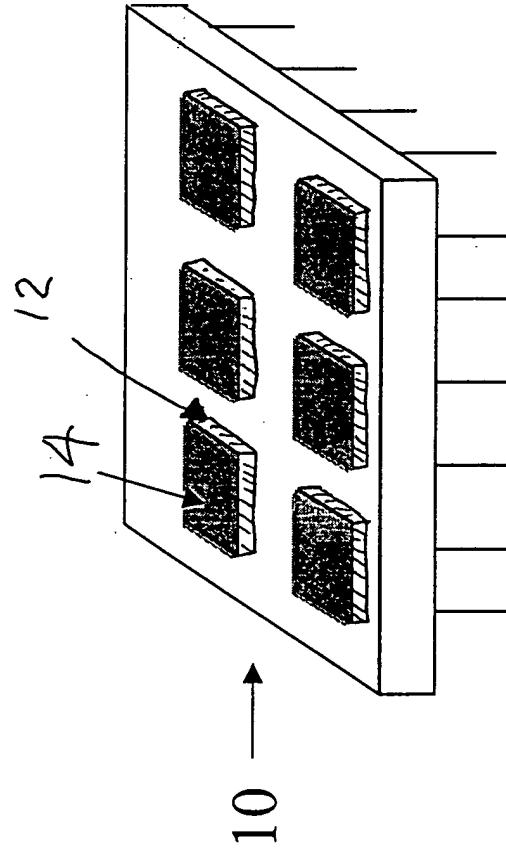


FIG 3

F10224-4T85560

Odorant/Olfactory Receptor Sequence of *Canis familiaris*: (SWISS-PROT:P30955)

MTEKNQTVVS	EFVLLGLPID	PDQRDLFYAL	FLAMYVTIIL	GNLLIIVLIQ	LDSHLLPMPY
LFLSNLSFSD	LCFSSVTMPK	LLQNMQSQVP	SIPYAGCLTQ	MYFFLFFGDL	ESFLLVAMAY
DRYVAICFPL	HYTTIMSPKL	CFSLLVLSWV	LTMFHAVLHT	LLMARLCFCA	NTIPHFFCDN
SALLKLACSD	TQVNELVIFI	MGGLILVIPF	LLIITSYARI	VSSILKVPSA	IGICKVFSTC
GSHLSVVSLE	YGTVIGLYLC	PSANNSTVKE	TIMAMMYTVV	TPMLNPFYIS	LRNKDMKGAI
RRVICRKKIT	FSV				

Amino acids: 330

Molecular weight: 35197 dalton

SOURCE:

G protein Coupled Receptor DataBase (GPCRDB)

(<http://receptor.Mgh.Harvard.Edu/GCRDBHOME.Html>)

FIG 5

Gas of detected	Peptides	
	B1	Pb2
Trimethylamine (5.86ppm)	5696	221
Dimethylamine (3.78ppm)	3851	589
Ammonia (4.86ppm)	1022	345
Acetone (7.21ppm)	13	31
Formic acid (1.33ppm)	161	97
Ethanol (4.68ppm)	-5	16
Formaldehyde (6.54ppm)	-25	19

Peptide sequence of B1:DPDQRDC

Peptide sequence of Pb2: LFLSNLSFSDLCA

09535814-032800